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ABSTRACT

The National Adult Literacy Project's research and development agenda, developed through a literature survey and consultation with practitioners and scholars, is elaborated in this paper. Each of the seven topic areas begins with a rationale for its importance and a brief review of relevant research. Proposals for research studies and/or development activities are recommended, and some specific procedural suggestions are made. The seven topics are (1) unique attributes of adult beginning readers; (2) learner diagnosis and assessment, including diagnosis of learning-disabled adults, assessment of job-related skills, assessment of other functional skills, and guidelines for more effective use of tests and development of alternative approaches; (3) staff training; (4) impact of literacy programs on students' quality of life; (5) teacher characteristics and methodologies--the need for cultural sensitivity; (6) technology; and (7) literacy development in other countries. The appendix brings together all of the research and development proposals in a single list. (SK)

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RESEARCH AND DEVELOPMENT AGENDA

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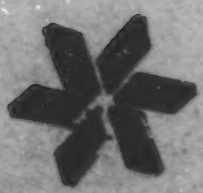

NATIONAL ADULT LITERACY PROJECT
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RESEARCH AND DEVELOPMENT AGENDA

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National Adult Literacy Project
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PREFACE

The National Adult Literacy Project (NALP), sponsored by the National Institute of Education (NIE), is one component of the President's Initiative on Adult Literacy.

Work on NALP began in September 1983, by the Far West Laboratory (FWL) for Educational Research and Development in San Francisco, and The NETWORK, Inc., in Andover, Massachusetts. The project undertook the development of a number of documents that would contribute to the improvement of literacy policies and practices. One of these documents is the Research and Development Agenda to identify areas of research to fill in knowledge gaps and information needs in adult literacy instruction.

Project staff would like to acknowledge the contributions of the many literacy experts, practitioners and scholars for their input, feedback and suggestions; Michael Brunner, our Project Officer, who worked very closely with me, and who provided continual feedback and support; Bonnie Lurie, the administrative assistant, for word processing; Jane Margold, for editing; and all the project advisors for their suggestions.

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INTRODUCTION

During the last two decades, literacy studies have begun to give us a picture of the impact of adult basic education programs. Researchers have looked at the process of adult learning and the effects on learners of various program designs, teaching procedures, materials and means of assessment. But as Kavale and Lindsey, in their 1977 review of the literature on adult basic education, stated: "for the most part (research to date has consisted of) . . . rudimentary status studies without research designs or statistical treatment (p. 69)." Kavale and Lindsey also found that the reading processes of adult illiterates had not been carefully studied. Nor had teaching techniques, materials and program effectiveness been evaluated systematically.

Since 1977, the adult reading process has been the subject of more extensive research (Lindsey and Jarman, 1984), but few studies have focused exclusively on the adult beginning reader (Boraks, 1981.) Program effectiveness has also begun to be analyzed more consistently, but much of this research has been limited by the outcomes selected for study and the methodology employed (Darkenwald and Valentine, 1984). Similarly, while a number of researchers have explored new definitions and measures of adult literacy, their premises and research methods have often been controversial (Torres and Harnisch, 1983).

Thus, although there is a growing information base on adult illiteracy, many questions remain to be answered. One obstacle in arriving at answers is the complexity of the problem. Adults from many different backgrounds are illiterate and their reasons for avoiding or seeking literacy training vary considerably. It must be recognized, too, that reading is more than the ability to decode words; it is a process embedded in a sociocultural context that helps determine what adults read and their scope of understanding. The variables that affect an adult's acquisition of literacy skills include the interrelationships between the many different aspects of the literacy program (e.g., teacher characteristics, assessment methods, materials, scheduling of classes, etc.) and the adult's cultural background, personal experiences, work history and socioeconomic status. Defining, sorting out, accounting for and controlling these variables is not easily accomplished.

Not surprisingly, there is controversy among researchers as to which methods of research are appropriate to the study of literacy. Currently, quantitative approaches, which attempt to isolate variables so that changes and relationships can be identified clearly, are the dominant mode in educational research in general. However, a number of adult educators have deemed qualitative approaches more appropriate to the study of adult literacy (Apps, 1979; Boraks, 1981)--primarily because reliance on quantitative methods often entails pre-identifying variables

that may or may not turn out to be the key factors in the efficacy of a program. Qualitative approaches emphasize the discovery of relevant variables through observation in natural settings. Analysis can then focus on discerning patterns and relationships in the data collected (Miles and Huberman, 1984).

While the usefulness of qualitative versus quantitative research is too broad a topic to be discussed here, we can suggest that there is need and room for both in the study of adult literacy. Qualitative methods seem more appropriate for study of those aspects of the adult literacy acquisition process that involve complex variables which are difficult to isolate and control. Quantitative approaches are useful when specifiable variables need to be measured. At times, both methods can be combined to produce much more powerful studies than could be attempted if one or the other approach were used. The Research and Development Agenda recommended by the National Adult Literacy Project (NALP) will undoubtedly benefit from the use of both methods. Before these research and development activities are presented, however, the following section describes how they were generated.

THE PROCESS OF FORMULATING THE RESEARCH AND DEVELOPMENT AGENDA

In January 1984, the National Adult Literacy Project (NALP) identified a preliminary list of research and development (R&D) items after surveying the relevant literature and consulting with practitioners and scholars in the field. A NALP-sponsored national conference on adult literacy was then held in Washington, DC, and the list was expanded to include research recommendations submitted by the conference presenters and participants. NALP's advisors and people who requested the conference papers were also asked to specify research and development needs.

Analysis of the responses showed that there was the greatest interest in the following items on the preliminary R&D agenda:

- development of improved assessment techniques
- development of linkages and resource sharing among literacy programs
- studies of the differences between literacy acquisition in adults and children
- expansion of the use of technology
- studies of the applicability in the United States of other countries' approaches to adult literacy development

Discussions with NALP project advisors and data collected during the NALP field-site interviews indicated that the following additional R&D needs should be included:

- o development of staff training models, particularly ones that deal with the areas of recruitment, effective use of diagnosis and assessment and training of volunteers
- o studies of programmatic factors affecting learners, including "quality-of-life outcomes" and cross-cultural sensitivity
- o studies of the characteristics of effective teachers

In the final R&D agenda, priority was given to research that could fill in knowledge gaps and information needs in adult literacy instruction. The highest priority was given to R&D activities that would, in the opinion of NALP project advisors, have the greatest payoff to practitioners.

Assessment of the agenda according to these criteria led to the reorganization and consolidation of some items. For example, familiarity with the literature indicated that the concern about recruitment could be answered most effectively by development activities emphasizing widespread dissemination of already-identified successful recruitment methods. It seemed most appropriate to subsume the item under the category of development of a staff training model, which would include training in recruitment methods. Certain other items were similarly recategorized. The only item to be totally eliminated was the promotion of linkages and resource sharing among literacy programs. This was deemed a policy issue that was more appropriately discussed in the "White Paper" produced by NALP.

The final R&D agenda includes the topic areas outlined below:

- o the unique attributes of adult beginning readers
- o learner diagnosis and assessment
- o staff training
- o adult literacy programs and students' "quality of life"
- o teacher characteristics and methodologies
- o technology in adult literacy
- o literacy development in other countries

Each of the topic areas begins with a rationale for its importance and a brief review of relevant research. Proposals for research studies and/or development activities are then recommended. In some cases, specific suggestions are made for carrying out the R&D proposed according to a particular procedure.

THE UNIQUE ATTRIBUTES OF ADULT BEGINNING READERS

Much is known about how children learn to read, but few investigations have focused on adult beginning readers (Chall, 1984; Boraks, Schumacher and Lavery, 1982). As a result, instruction is usually predicated on the assumption that the learning-to-read process in children and adults is similar, even though some research calls this assumption into question. Studies indicate, for example, that adults differ in speed of performance, reaction time, and certain physical abilities, such as eidetic imagery (i.e., the ability to "see" words in the mind's eye) (Zahn, 1980). Past experiences, personal interests and sense of self further distinguish adults from children (Zahn, 1980).

There is also some evidence that adults learn to read when discrete skills are presented in a sequential manner (Chall, 1984; Deveaux, 1984; Darling, 1980; Mezirow, Darkenwald and Knox, 1975; Ryan and Furlong, 1975), but this technique does not seem to be universally applicable (Buchanan and Sherman, 1981). Other preliminary studies of adults (Boraks, et al., 1982, 1981) indicate that successful beginning readers can identify what they know and do not know, can monitor the extent to which they grasp meaning and are willing to make successive attempts to read accurately. It has also been found that successful adult beginning readers appear to rely primarily on graphophonic cues at first, then later integrate the use of grammatical cues (Malicky and Norman, 1982).

The few studies of the differences between adult and children beginning readers indicate, too, that adults seem to differ in the way thay misread words; in the way they use and misuse vowels, patterns and semantic cues, and in the way they incorporate spelling into their reading strategy (Malicky, et al., 1982; Boraks, et al., 1982, 1981; Raisner, 1978). There is additional evidence that once low-literacy adults have mastered decoding, they may not be able to apply these skills as automatically as do children who read at a beginning grade level. These adults may need extended practice to be able to apply decoding skills easily (Sticht, 1975).

Recognition of these differences, however, does not provide a sufficiently detailed understanding of how adult beginning readers become literate, nor how they acquire greater proficiency. Meanwhile, most teaching methods used with adults are based on data on beginning child readers or proficient adult readers (Boraks and Schumacher, 1981). Research is thus needed to expand and deepen the knowledge base on adults' acquisition of literacy skills. Chall (1984) suggests the following research questions: What kinds of errors, strengths and weaknesses characterize adult readers at different levels? How long does it take for adults to progress through different reading levels? How much direct instruction is necessary? How much independent reading is necessary?

These questions could be dealt with in the more general R&D activities suggested below:

Research Proposal

Conduct studies that focus on identifying the differences between the development of literacy skills in adults and in children. These investigations should be built upon existing research into the reading strategies and the errors that seem to be most common to adult beginning readers.

Development Proposal

Develop methodologies to teach literacy development, based upon the research of how adults learn to read. Test the effectiveness of these methodologies and use the results to improve teaching practices with adult beginning readers.

LEARNER DIAGNOSIS AND ASSESSMENT

Adult literacy programs currently rely upon a wide assortment of tests for student diagnosis and assessment. A large study of state-administered programs found that 66 different standardized tests and many locally-developed tests were in use (Development Associates, 1980). However, according to this study, most of these tests measured a narrow range of learning disabilities, skills and progress toward student goals. Many of the tests lacked validity and/or reliability and some had not been intended for or standardized for use with adults.

A number of researchers agree on the need for tests that are based on sound measurement principles and designed specifically for adults (Chall, 1984), in accordance with the goals of students, literacy programs and the surrounding community (Kirsch and Guthrie, 1980; Torres and Harnisch, 1983). The need for research and development seems to be greatest in the following five areas: 1) diagnosis of learning-disabled adults; 2) assessment of job-related work skills; 3) assessment of other functional skills; 4) development of guidelines for more effective use of existing tests, and 5) development of alternative approaches to diagnosis and assessment.

1. Diagnosis of Learning-Disabled Adults

Although an estimated 10% to 15% of children and adults have learning disabilities that impede their ability to read (Carroll and Chall, 1975), scant attention has been paid to learning-disabled adults in adult literacy programs (Chall, 1984). Few diagnostic tests exist for English-speaking adults who may be

learning disabled and none are readily available for limited-English speakers, with the sole exception of tests for Spanish speakers (Longfield, 1984). Those tests that do exist tend to be based on unsound concepts about learning disabilities; many also have weak content validity (O'Donnel, 1984).

Without accurate diagnostic tests that allow literacy providers to identify students with learning disabilities, program resources cannot be allocated to serve a population that is particularly in need of literacy training. Nor can teaching strategies be adapted to the strengths and weaknesses of learning-disabled adults. The following development activities are thus suggested:

Development Proposals

o Develop and validate diagnostic tests and procedures to identify learning disabilities in English-speaking adults.

o Develop and validate diagnostic tests and procedures to identify learning disabilities in non-English and limited-English-speaking adults.

2. Assessment of Job-Related Work Skills

Various approaches to the assessment of job-related literacy skills have been developed; however, they are an imperfect answer to checking literacy students' readiness to find various types of employment. A few attempts have been made to test specific job-related skills, but rely on costly research methodologies to do so (Vineberg and Joyner, 1983). Most, however, assess general reading or computational ability, rather than the ability to deal with the literacy requirements of a particular job. As one researcher has pointed out, the use of grade-level reading tests is particularly inappropriate, since job-related reading abilities can differ substantially from the skills measured by tests intended for school children (Sticht, 1983). Diehl and Mikulecky (1980) also questioned whether existing tests measured job-related literacy, after finding that workers' ability to read job-related materials was greatly enchanced when they used extralinguistic cues, as they were able to do at work (but not on the tests). More accurate instruments are thus needed to assess the actual literacy requirements of particular jobs and tasks.

Development Proposal

o Develop and validate a process or tests that will assess adults' development of the literacy skills required for particular job tasks.

3. Assessment of Other Functional Skills

Serious questions have been raised about the reliability and the content, criterion-related and construct validity of the tests that now assess levels of functional literacy (Torres and Harnisch, 1983; Anders, 1981; Cervero, 1980; Kirsch and Guthrie, 1980; Griffith and Cervero, 1977). Researchers argue that tests often do not adequately define what they mean by functional literacy nor provide a rationale for the relationship between test items and functional literacy (Anders, 1981). In some cases, the tests measure the extent to which students have attained verbal, writing and computational abilities associated with the test developers' particular definitions of financial, educational and job success rather than functional literacy competencies commensurate with students' needs (Cervero, 1980; Kirsch and Guthrie, 1980).

Arriving at a usable definition of functional literacy is admittedly problematical. As Torres and Harnisch (1983) have pointed out, "There is no one way to define all of the behaviors implied by functional literacy for any one group" (p. 13). Cervero (1980), too, argues that a common or single operational definition is not feasible, since functional literacy tests necessarily reflect particular sets of values and purposes. However, tests can and should be tied to the specific objectives of a particular literacy program and to the decisions that will be based on test results (Torres and Harnisch, 1983). A few new approaches being developed, such as the California Adult Student Assessment System (CASAS) attempt to be adaptable to the particular objectives of different programs. An essential component of the CASAS system is a bank of more than 2000 items designed to measure attainment of CASAS-defined skills at various levels of difficulty. Programs can choose from these items to design assessment that "measures locally defined competencies and learning outcomes, yet provides a framework for common articulation across districts and agencies" (Handbook for CBAE Staff Development, 1983 p. A-13). Such an approach seems promising and should be studied further.

Finally, as one researcher suggests, it may not be sufficient to measure functional literacy with "objective paper and pencil tests" (Cervero, 1980, p. 64). Alternatives, such as the use of writing samples, demonstrations, observations, simulation and other approaches, may be more effective ways to measure certain functional literacy competencies. The CASAS system has developed some strategies for this type of measurement (CASAS Item Bank User's Manual, 1983), which also merit further study. However, the most immediate R&D needs are as follows:

Research Proposals

o Conduct a study to identify existing procedures that assess functional literacy skills at acceptable levels of

validity and reliability. Procedures should have a clearly-articulated rationale for measuring the items that are included. They should also provide a consistent and stable measure of literacy abilities that are directly related to a variety of specific program purposes and needs.

o Conduct a study of the validity and reliability of existing alternatives to paper and pencil tests. Alternative measures should also have a clearly-articulated rationale and provide a consistent and stable measure of literacy abilities related to a variety of specific program purposes and needs.

Development Proposal

o If no acceptable procedures to assess functional literacy are found, develop a procedure with a clearly-articulated rationale for what is measured. The procedure should also provide a consistent and stable measure of literacy abilities that are directly related to a variety of specific program purposes and needs. The procedure may include alternatives to paper and pencil tests.

4. Development of Guidelines for More Effective Use of Tests

Until further research and development yields more effective tests, many programs will continue to use existing instruments. If literacy providers are to cope with the drawbacks of these tests, they will need to have guidelines for evaluating how closely particular tests match their program objectives. They also need ways to increase the validity of the test results by ensuring that the tests measure what they claim to measure.

Although Nafzinger, et al. (1975), published a review of existing adult literacy tests that looked at measurement validity, appropriateness, technical excellence and administrator usability, their guide is now out of date. A set of guidelines for analyzing and using existing tests was also published by Northwest Regional Educational Laboratory (Anderson, 1981), but this guide does not reflect the research on new modes of assessment currently being carried out at Northwest Laboratory.

A need thus exists for developing new guidelines for helping literacy providers select tests that meet high standards of validity, usability and reliability at the same time that they measure students' attainment of particular skills. The guidelines would be most valuable if they included procedures for analyzing the reasons that test takers make certain errors. Harnisch (1982) has developed a way to identify unusual response patterns in groups of test items, then determine whether the error stemmed from lack of skills or knowledge, test anxiety,

unusual life experiences, copying or other causes. Such information can help a program determine the accuracy of a test score. It can also indicate whether or not a student has actually met the objective and what the obstacles may be. Fischer (1981) found that certain categories of errors were related to mistakes in information processing that were attributable to carelessness rather than lack of knowledge. Identifying the type of test error can result in better diagnosis of the student's further learning needs. These considerations inform the development proposals suggested below:

Development Proposals

o Using the findings from current research in adult literacy assessment, develop a set of guidelines for using existing tests more effectively. The guidelines will include ways developed by researchers and practitioners to analyze student test errors.

o Develop an annotated guide to existing diagnostic and assessment tests that includes a discussion of what each test actually measures and an assessment of its validity and reliability. The guide should also present criteria for choosing tests that are related to student, program and community goals.

o Develop and disseminate an inservice training model that focuses on effective use of existing tests.

5. Development of Alternative Approaches to Diagnosis and Assessment

Literacy programs shy away from conventional assessment, probably because teachers are reluctant to treat their students as school children and want to avoid reinforcing the sense of failure that may result from low test scores (Chall, 1984). Many teachers probably also want to minimize the anxiety students associate with tests. In addition, some literacy providers reject conventional tests as being inappropriate to their programmatic goals (Bitterman, 1983). Community-based programs in particular often criticize assessments that only measure reading levels and functional skills for ignoring other important aspects of literacy attainment, such as the development of self-esteem or feelings of achievement at being able to read a hymnal or help children with school work (Wallerstein, 1984; Gold and Johnson, 1982).

One solution to the deficiencies of existing tests is to explore approaches that allow students to participate in their own diagnosis and assessment. Currently, although research indicates that even beginning readers are able to gauge their own strengths and weaknesses, this ability to self-diagnosis is not deliberately tapped by teachers of adult illiterates. The students' self-perceptions are not usually used as a basis for

placement, instruction or choice of materials. Nor do teachers and students routinely talk over each others' perceptions of the students' reading skills. Sometimes teachers do not even let students know their diagnostic test score or their observations.

Allowing students more involvement in their own diagnosis could ensure that teachers had a more complete, accurate picture of the learner to begin with. Students could cooperate with the teacher by discussing the skills they felt they had as a basis for improving their reading ability and any weaknesses they felt they needed to correct. Teachers could then add their observations, which would be based on their knowledge of the process of literacy acquisition in adults.

In a similar way, allowing students more involvement in their own assessment could ensure that teachers could formulate evaluation plans that could mesh with a broad range of student goals. Research indicates that literacy program staff are interested in encouraging learners to participate more fully in assessment, rather than tests of reading levels (Bitterman, 1983). In discussing the use of student self-reports, Anders (1981) suggests that teachers set up a profile for each student that would describe attendance, work habits, interests, strengths and personal short and long-term goals. Student and teacher could meet at regularly scheduled times to review the profile and add new information. Data in the profile could also be used for program evaluation.

Few studies or development activities, however, have focused on describing ways to involve students in assessing the extent to which they have attained programmatic and community goals--especially those goals that are not easily measured by conventional tests. Encouraging student participation in this type of assessment could allow for more complete and accurate evaluating since once again, strengths and weaknesses could be pinpointed that tests or observation alone might not capture. In addition, students' active involvement in their own assessment will provide them with feedback on their achievement that is more directly related to their needs and goals. Frequent assessment conferences that utilize student input and focus on students' short-term goals are likely to reinforce in students a sense of continued small successes which will encourage them to persist in their literacy program. The following R&D proposals are suggested accordingly:

Research Proposals

o Conduct a study to identify and describe promising alternatives or supplements to the use of conventional diagnostic and assessment tests--especially those that involve learner participation. This study should include a literature review of studies of alternative and supplemental approaches.

o Programs that use alternatives for diagnosis and assessment should be identified from a literature review and from national survey data on literacy programs. Interviews with the staff of these programs should be conducted to determine ways in which students participate in their own diagnosis and assessment, what the programs have found effective and how they define that effectiveness.

o Study the effectiveness of promising alternative diagnosis and assessment practices (identified through the study above), which are already in use in existing programs. Consider the effects of such practices on accurate diagnosis and assessment of students' achievement of goals, programs' achievement of goals, and student motivation, retention and responsibility for learning.

Development Proposal

o Develop a model or models for alternative diagnoses and assessment approaches based upon the above studies. Field test, revise and disseminate the model(s).

STAFF TRAINING

Staff are a key element in adult literacy programs. But, as one literacy researcher points out, "many administrative and instructional personnel are lacking in subject-matter knowledge, management skills and other skills for establishing a supportive, failure-free environment (Newman, 1984, p. 1). Other researchers confirm that although heavy professional and psychological demands are placed on adult education teachers (Newman, 1984; Delker, 1984) and many of the teachers are inexperienced (Delker, 1984; Mezirow, Darkenwald and Knox, 1975), no comprehensive staff development plan exists to aid these teachers.

However some groundwork has been laid that could be utilized in formulating such a staff training plan or model. Several experts have outlined the competencies and characteristics that adult educators should have (Newman, 1984; James, 1981; Rupert, 1984). And one large study of adult education teachers and program directors pointed to student retention, diagnosis of academic needs, increased knowledge of teaching strategies and increased knowledge of content areas as the areas of greatest need for staff development.

Other adult educators stress the need for training that would equip staff with the skills to establish a supportive learning environment. Many experts have asserted that the ability to foster self-esteem, to be supportive, to listen, and to be culturally and socially sensitive are essential to successful literacy instruction (Longfield, 1984; McCullough, 1981;

Veri, 1980). The skills of counseling, needs assessment, goal setting and resource referral are also mentioned as vital (Prosen, 1983).

The NALP project's field interviews indicated a great deal of support for the idea that the affective aspects of teacher-student interaction are a key factor in student success. However, there appeared to be a need for extensive staff development that covered not only students' affective needs but their cognitive needs as well. The NALP staff found that too often literacy providers were relying on worn-out slogans, ideas, teaching techniques, materials and books handed down from other sources. They were forced to fall back on hunches, their own formal school experiences and one or two references which may not have been relevant to what their students needed and wanted. They often had limited access to resources, were isolated from others with similar problems and were faced with feelings of bewilderment when trying to operate a program for adult learners. Administrators and literacy staff often stated that their desire for staff development stemmed from their need for new skills that would enable them to gather current information, share effective strategies, broaden ideas and gain access to the latest technology, resources and state-of-the-art thinking in literacy education. They also stressed that staff development offered an opportunity for recognition, support and a feeling of renewal, rather than burn-out.

In line with these needs, the following development activities are recommended:

Development Proposals

o A generic training model needs to be developed, with two training strands: one for administrators and one for staff responsible for staff development. Strand one, the training for administrators would be directed at guiding administrators through a step-by-step process that could be followed to set up, adapt, improve or revise a literacy program. The steps would include (1) acquiring background information on the state-of-the-art of literacy education; (2) developing a program philosophy; (3) assessing program needs; (4) setting goals; (5)identifying instructional methods; (6) identifying instructional resources; (7) designing program evaluation; (8) planning life skills with learners, and (9) developing community partnerships and literacy coalitions. The training would focus on teaching administrators how to use each other as resources in developing problem-solving strategies and harnessing all available sources for assistance. Administrators could also learn how to use existing resources, such as resource centers, information systems and data bases.

o Development of the second strand of the training model would concentrate on designing training for people in charge of staff development for their own local literacy programs. The

training would cover the basics of conducting staff development and of gaining access to resources needed to implement a successful adult literacy program. In addition, the training model would include information on successful reading methodologies and strategies to actively involve students in the learning process, provide learner-centered instruction, diagnose and assess learners' needs and reading levels, achieve successful teacher-learner interactions, provide culturally-sensitive support systems for learners and perform evaluations. The model would also be designed to help participants learn how to network with and learn from other literacy program staff and gain access to resources from national clearinghouses, data bases and other centers of information and skills.

ADULT LITERACY PROGRAM AND STUDENTS' "QUALITY OF LIFE"

Few studies have assessed the impact that adult literacy programs have on students' "quality of life"--that is, on a student's personal and interpersonal development. The research that does exist in this area, however, documents the importance that "quality of life" outcomes have to the students who participate in literacy education. In the view of learners, improvements in one's self-esteem, social and communication skills, sense of responsibility, ability to become involved in the community, degree of self-reliance, critical thinking abilities, capacity to help one's children in their school work and sense of control over one's personal and social reality are all critically important results of literacy programs (Darkenwald and Valentine, 1984; Association for Community Based Education (ACBE) 1983; Development Associates, 1980).

But, while it is clear that personal and interpersonal skills can be enhanced by participation in literacy programs, little is known about how programs foster these outcomes. Still less is known about the relationship between a particular outcome and program organization, teacher-student interactions, peer interactions and other program aspects. Evidence exists to suggest that the program aspects that are most likely to enhance students' quality of life are learner involvement in goal setting, diagnosis, and choice of materials, methods and assessment (Wallerstein, 1984; James, 1981) and group interaction that emphasizes peer teaching, problem-solving and critical thinking (Deveaux, 1984; Wallerstein, 1984; Darling, 1981; James, 1981, etc.). Teacher-student interactions in which the teacher is caring, warm, supportive and facilitative rather than authoritarian are also thought to be a key element of successful programs (Longfield, 1984; Prosen, 1983; McCullough, 1981; James, 1981). However, no systematic studies have confirmed that certain program factors contribute to quality of life outcomes. It has been argued that if such factors could be identified, adult literacy programs would be able to heighten student motivation, recruitment and achievement (Deveaux 1984; Darling, 1981; Wilson,

1980). Attention to quality of life outcomes could also extend the effects of literacy education beyond the acquisition of particular reading or vocational skills, so that adult students can take more effective control over their own and their families' lives, thereby ensuring that their children become literate (Richardson, 1982). Programs that pay attention to students' quality of life are also more likely to consider adult learners' feelings, needs and goals in all their complexity--a focus regarded as crucial to the success of adult education (Hunter and Harman, 1979; Mezirow, et al., 1975). In accordance with this focus, the following research activities are suggested:

Research Proposals

o Conduct a study to identify adult literacy factors that contribute to or inhibit personal, interpersonal and community-related quality of life outcomes for students. The hypothesis that program aspects that are learner-centered are key factors in fostering quality of life outcomes should be tested. Quality of life outcomes to be considered should include improved self-esteem, self-concept, self-confidence, social/communications skills, sense of responsibility for and ability to learn, self-reliance, problem solving, decision making and critical thinking. In addition, ability to help one's children with school work, to support them in their learning, interact with the school in their behalf and provide a positive role model for learning should be looked at as important quality of life factors, as should development of a sense of control over one's personal and social reality and the assumption of an active role in community life.

o Conduct a study in which programs are identified that range from those that deliberately foster the development of reading skills but attend little to quality of life outcomes (as defined above) to those that promote reading skills and some or most of the quality of life outcomes outlined above. Study the relationship between recruitment, retention and achievement of learner and program goals and the degree to which a program fosters quality of life outcomes for students at all literacy levels.

TEACHER CHARACTERISTICS AND METHODOLOGIES: THE NEED FOR CULTURAL SENSITIVITY

In describing the type of instructors that literacy program directors look for, James (1981) comments that the most desirable teacher is a "'people person:' someone who can relate well to adults . . . accept them as they are and not look down on them . . ." (p. 88). Longfield (1984) elaborates further that adults are more likely to learn if the teacher is able to help them establish connections between "new learnings and relevant prior knowledge." She adds that many literacy students are more

experienced in the "school of life" than their teachers. "Refugees have lived through war, experienced starvation, chanced death, left families behind and . . . dealt with culture shock" (Longfield, p. 6).

As many researchers corroborate, these social realities and concerns must be taken into account by adult education teachers. Guthrie and Kirsch (1984), Freire (1970) and other proponents of the social interaction perspective on literacy repeatedly point out that communication is conditioned by the social context in which it occurs and that a person's sociopolitical realities is conditioned in turn by that person's culture. Thus, literacy teachers must be "culturally" sensitive," or aware of their students' wide range of experiences, responsibilities, abilities and disabilities, learning styles and other characteristics.

During the NALP staff's visits to English as a second language (ESL) literacy programs, the pattern that emerged was that cultural sensitivity on the part of teachers was a critical aspect of successful programs. Cultural sensitivity was important both as an overriding philosophical concept and as a practical consideration in these programs. However, while the need for cultural sensitivity is stressed by practitioners and experts in the field of literacy, the term is often used as a catch-all phrase to describe the kind of person who can meet the diverse needs of adult illiterates. "Culturally sensitive" may refer to a teacher who is actually a member of the same cultural group as a particular student population, or, the term may refer to a teacher who is able to utilize the experiences of adult students as vehicles for improving their literacy skills. It is clear that cultural sensitivity must be more clearly defined and other teacher characteristics more closely analyzed if literacy programs are to create a context that can accommodate students from many cultures and literacy levels--including those who are not literate in their original language.

Research Proposals

o Conduct a study to determine what constitutes cultural sensitivity and how it may be demonstrated most effectively. Currently, the literature contains descriptions of sensitive teachers, which are useful but do not go far enough. The characteristics of a culturally sensitivie teacher need to be defined and the classroom practices and methodologies of these teachers needs to be thoroughly described and analyzed. One question to be answered is whether cultural sensitivity entails more than having high expectations for learners, belief in the learners' ability to succeed, respect for the learners' experience and a willingness to encourage the learner to participate in determining learning objectives.

o Conduct a study based on the hypothesis that there is a positive relationship between culturally sensitive teacners, as defined by the study suggested immediately above, and student retention and achievement.

TECHNOLOGY IN ADULT LITERACY

Currently, many researchers see computer-assisted instruction as a way to increase the availability of basic skills instruction (Fingeret, 1984), but only limited technology approaches are now being used in literacy programs for adults (Stone, p. 19). The major reasons are that administrators are often discouraged by the expense of computer systems or by the difficulty in choosing the one that best suits their needs (Nickse, 1982).

Another problem for adult literacy providers who want to make use of computer-based or computer-assisted instruction is that materials developers are creating instructional materials for adults based on children's needs. The materials thus emphasize "how tos" and do not deal with the learner's employability (Berlin, 1983). Nor can they at the present time, since little is known about the vocabulary, grade-level requirement and specific skills that are required to perform the new jobs that the explosion in technology has created.

Literacy providers recognize the potential the new electronic technologies have for improving literacy education. Those using computer-assisted instructions point out its success in building competencies, independence, and literacy skills. They also stress that a computer can provide immediate private feedback to the learner. It is also capable of unlimited patience--a characteristic that teachers of adults have identified as critical.

However, computer-assisted instruction still raises a number of ethical and pedogogical issues because its potential is only vaguely understood, and research information is still limited. The following recommendation is offered accordingly:

Development Proposal

o Identify approaches that successfully utilize technology in adult education. Use the identified approaches to develop training modules that can broaden the use of technology in the development and delivery of adult literacy instructional systems.

LITERACY DEVELOPMENT IN OTHER COUNTRIES

As the United Nations-sponsored Experimental World Literacy Programme (EWLP) has found in recent years, victims of illiteracy all over the world have similar characteristics. They are adversely affected by problems that go hand-in-hand with poverty, limited access to goods and services and difficulty in engaging in the political process (UNESCO, 1983).

Literacy in most developing countries is now no longer considered a basic tool for learning to read and write, but a skill that can enable illiterates and semi-illiterates to attain knowledge that is essential for their personal development and for their contribution to their own societies (UNESCO, 1983). The variety of experimental programs that exist can yield a great deal of significant information about traditional literacy instruction and functional literacy instruction, if explicit data can be obtained about the concerns of various groups, the strategies used, and the underlying motivations of the literacy providers. By defining both programmatic and personal objectives, programs could be identified that lead to students' personal development and to the improvement of social, economic and cultural conditions, as Keehn (1976) suggests.

In the light of the success of numerous literacy programs and campaigns in other countries with an illiterate population, approaches and methods used internationally could be adapted for use in this country. The following research recommendation is thus offered:

Research Proposals

Conduct a research study of literacy programs in other countries to determine:

- The expressed aim of literacy development in developing countries and the similarities and differences in the way programs operate in those countries as compared to programs in the United States.

- The extent to which methods and approaches to literacy development are applicable to literacy programs in the United States.

APPENDIX

DEVELOPMENT PROPOSALS

o Develop methodologies to teach literacy development based upon research studies of how adults learn to read. Test the effectiveness of these methodologies and use the results to improve teaching practices with adult beginning readers.

o Develop and validate diagnostic tests and procedures to identify learning disabilities in English-speaking adults.

o Develop and validate diagnostic tests and procedures to identify learning disabilities in non-English and limited-English-speaking adults.

o Develop and validate a process or tests that will assess adults' development of the literacy skills required for particular job tasks.

o If no acceptable procedures to assess functional literacy skills are found, develop a procedure with a clearly-articulated ration-ale for what is measured. The procedure should also provide a consistent and stable measure of literacy abilities that are directly related to a variety of specific program purposes and needs. The procedure may include alternatives to paper and pencil tests.

o Using the findings from current research in adult literacy assessment, develop a set of guidelines for using existing tests more effectively. The guidelines will include ways developed by researchers and practitioners to analyze student test errors.

o Develop an annotated guide to existing diagnostic and assessment tests that includes a discussion of what each tests actually measures and an assessment of its validity and reliability. The guide should also present criteria for choosing tests that are related to student, program and community goals.

o Develop and disseminate an inservice training model that focuses on effective use of existing tests.

o Develop a model or models for alternative diagnoses and assessment approaches based upon the above studies. Field test, revise and disseminate the models.

o A generic training model needs to be developed, with two training strands: one for administrators and one for staff responsible for staff development. Strand one, the training for administrators would be directed at guiding administrators through a step-by-step process that could be followed to set up, adapt, improve or revise a literacy program. The steps would

include (1) acquiring background information on the state-of-the-art of literacy education; (2) developing a program philosophy; (3) assessing program needs; (4) setting goals; (5) identifying instructional methods; (6) identifying instructional resources; (7) designing program evaluation; (8) planning life skills with learners, and (9) developing community partnerships and literacy coalitions. The training would focus on teaching administrators how to use each other as resources in developing problem-solving strategies and harnessing all available sources for assistance. Administrators could also learn how to use existing resources, such as resource centers, information systems and data bases.

o Development of the second strand of the training model would concentrate on designing training for people in charge of staff development for their own local literacy programs. The training would cover the basics of conducting staff development and of gaining access to resources needed to implement a successful adult literacy program. In addition, the training model would include information on successful reading methodologies and strategies to actively involve students in the learning process, provide learner-centered instruction, diagnose and assess learners' needs and reading levels, achieve successful teacher-learner interactions, provide culturally-sensitive support systems for learners and perform evaluations. The model would also be designed to help participants learn how to network with and learn from other literacy program staff and gain access to resources from national clearinghouses, data bases and other centers of information and skills.

RESEARCH PROPOSALS

o Conduct studies that focus on identifying the differences between the development of literacy skills in adults and in children. These investigations should be built upon existing research into the reading strategies and the errors that seem to be most common to adult beginning readers.

o Conduct a study to identify existing procedures that assess functional literacy skills at acceptable levels of validity and reliability. Procedures should have a clearly articulated rationale for measuring the items that are included. They should also provide a consistent and stable measure of literacy abilities that are directly related to a variety of specific program purposes and needs.

o Conduct a study of the validity and reliability of existing alternatives to paper and pencil tests. Alternative measures should also have a clearly-articulated rationale and provide a consistent and stable measure of literacy abilities related to a variety of specific program purposes and needs.

o Conduct a study to identify and describe promising alternatives or supplements to the use of conventional diagnostic and assessment tests--especially those that involve learner participation. This study should include a literature review of studies of alternative and supplemental approaches.

o Programs that use alternatives should be identified from a literature review and from national survey data on literacy programs. Interviews with the staff of these programs should be conducted to determine ways in which students participate in their own diagnosis and assessment, what the programs have found effective and how they define that effectiveness.

o Study of the effectiveness of promising alternative diagnosis and assessment practices (identified through the study above), which are already in use in existing programs. Consider the effects of such practices on accurate diagnosis and assessment of students' achievement of goals, programs' achievement of goals, and student motivation, retention and responsibility for learning.

o Conduct a study to identify adult literacy factors that contribute to or inhibit personal, interpersonal and community-related quality of life outcomes for students. The hypothesis that program aspects that are learner-centered are key factors in fostering quality of life outcomes should be tested. Quality of life outcomes to be considered should include improved self-esteem, self-concept, self-confidence, social/communications skills, sense of responsibility for and ability to learn, self-reliance, problem solving, decision making and critical thinking. In addition, ability to help one's children with school work, to support them in their learning, interact with the school in their behalf and provide a positive role model for learning should be looked at as important quality of life factors, as should development of a sense of control over one's personal and social reality and the assumption of an active role in community life.

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o Conduct a study based on the hypothesis that there is a positive relationship between culturally sensitive teachers, as defined by the study suggested immediately above, and student retention and achievement.

o Conduct a research study of literacy programs in other countries to determine: The expressed aim of literacy development in developing countries and the similarities and differences in the way programs operate in those countries as compared to the programs in the United States.

o Conduct a research study of literacy programs in other countries to determine: The extent to which methods and approaches to literacy development are applicable to literacy programs in the United States.

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